

10/656,054
May 24, 2006
Reply to Office Action of 03/23/2006

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Amendments to the Specification

Please replace the abstract 27 with the following amended abstract:

~~The present invention provides for a Non-stick~~ A non-stick material coated glass slip layer for use in insulating tapes for electrical conductors. A conductive glass tape is interwoven with a ~~Non-stick~~ non-stick material coated glass tape to form the slip layer ~~of the present invention~~. The slip layer is sandwiched between an inner conductive layer that is in contact with an electrical conductor, and an outer conductive layer that is in contact with machinery, such as a generator. The slip layer allows for a difference of movement between the inner conductive layer and the outer conductive layer without damage to the insulating tape.

Please replace paragraph 27 with the following amended paragraph:

[0027] In one embodiment the slip layer is between 2-6 mils (0.05–0.15 mm) without overlap. This refers to the general thickness of the ~~Non-stick~~ non-stick material coated glass tape itself. Once wrapped around the electrical conductor, the slip layer will generally overlap with itself or the interwoven conductive layer. In a particular embodiment the slip layer and the conductive interweave are wound around the electrical conductor in a half lap manner. Depending on the orientation of how the slip layer is wound, this may produce a vertical striping pattern somewhat perpendicular to the axis of the electrical conductor.

Please replace paragraph 35 with the following amended paragraph:

[0035] In still another embodiment, the present invention provides for a method for manufacturing an insulating tape with an integral slip layer for wrapping of an electrical conductor. This method comprises wrapping an inner conductive layer of glass tape around the electrical conductor and then wrapping non-stick material coated porous glass tape interwoven with a conductive interweave glass tape around the electrical conductor

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over the inner conductive layer, wherein the slip layer is formed. Then wrapping an outer conductive layer of glass tape around the electrical conductor over the slip layer. To this, a resin is impregnated all the way to the inner conductive layer through the ~~Non-stick~~ non-stick material coated porous glass tape, and is then cured. In this method the slip layer is wrapped around the electrical conductor in an overlapping manner that allows the conductive interweave to maintain contact between the inner conductive layer and the outer conductive layer. The slip layers allows for a difference of movement between the inner conductive layer and the outer conductive layer without damage to the insulating tape.

Please replace paragraph 37 with the following amended paragraph:

[0037] Fig. 4 illustrates a simplified embodiment of the present invention. The slip layer is composed of non-stick material coated porous glass tape 40 interwoven with a conductive interweave glass tape 42. The slip layer allows a difference of movement between the inner conductive layer 44, which is in contact with an electrical conductor (not shown), and an outer conductive layer 46, which is in contact with machine assembly (not shown). In this figure, the various tapes and layers are shown spaced apart for clarity. In actuality, however, little or no space between the tapes and layer would be present. The type of wrapping shown in this figure exemplifies an typical half lap wrapping. Other types of wrapping will be known to one of ordinary skill in the art. In this example, the ~~Non-stick~~ non-stick material coated porous glass tape is about twice as wide as the conductive interweave glass tape. Also, ~~Non-stick~~ non-stick material coated porous glass tape is wound twice for every wind of the interweave glass tape. Variations in this configuration will be appreciated by one of ordinary skill in the art. A goal in the wrapping is to maximize the amount of slip protection that the non-stick material coated tape provides, while maintaining sufficient electrical conduct between the inner and outer conductive layers through the conductive interweave. This includes allowing for environmental conditions, such as operating temperatures of 155°C.